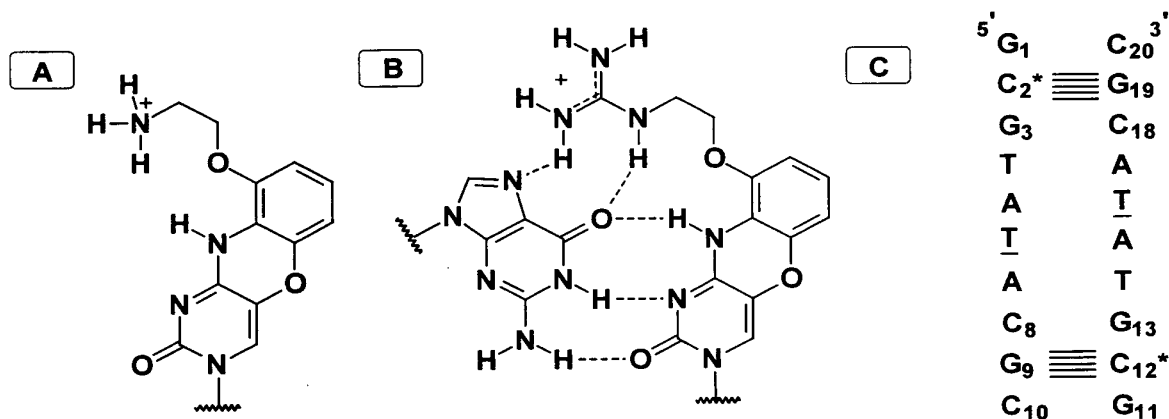
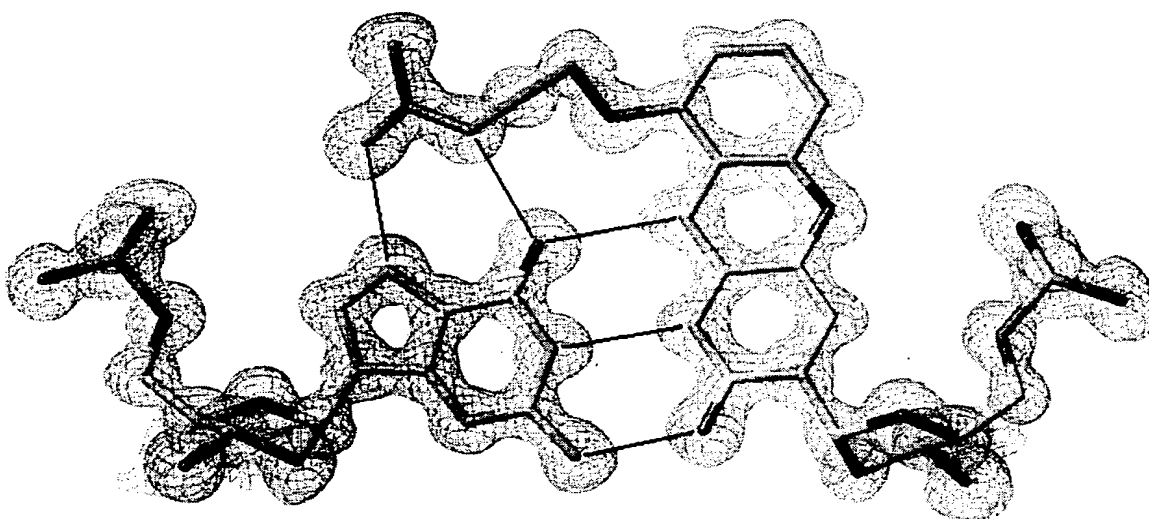


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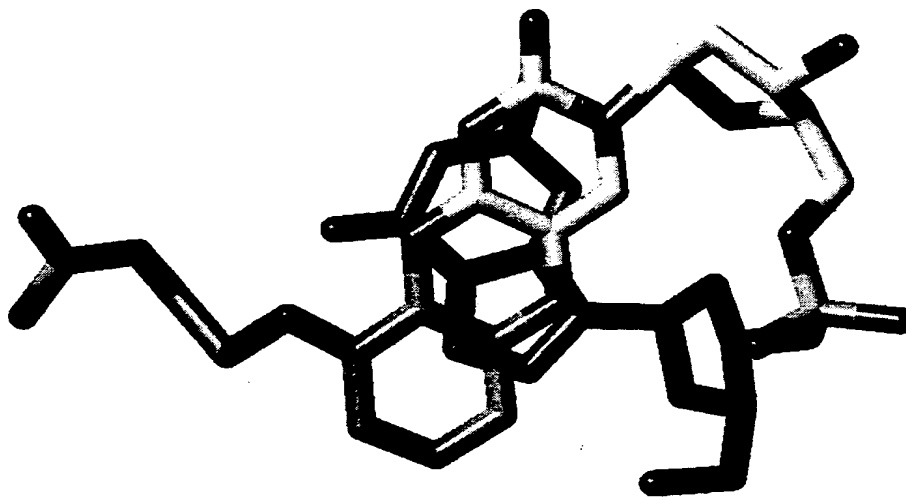
**Figure 1.** Structure of the tricyclic cytosine analog G-clamp<sup>5</sup> (A), of its extended analog guanyl G-clamp hybridized to complementary guanosine (B), and of the palindromic decamer duplex crystallized for this study (C). The five hydrogen bonds formed between C\* and G are indicated by horizontal lines (C\* = guanyl G-clamp, T = 2'-O-MOE-T).

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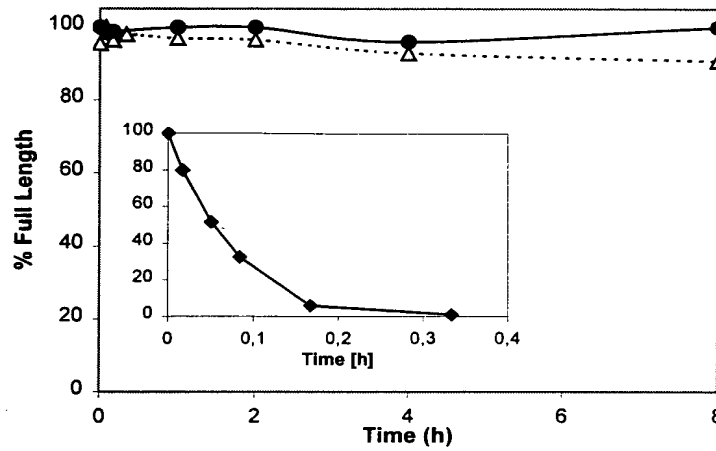
**Figure 2.** Fourier ( $2F_o - F_c$ ) sum electron density map (contoured at  $1.25\sigma$ ) around C12\* and G9 confirming formation of five hydrogen bonds (indicated by thin solid lines with distances shown in Å).

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**Figure 3.** Stacking between G1 and C2\*, viewed approximately along the vertical to the phenoxazine rings. Carbon atoms of G1 are shown in magenta, carbon atoms of the cytosine core of C2\* are shown in yellow and the remainder of the carbons are in green.

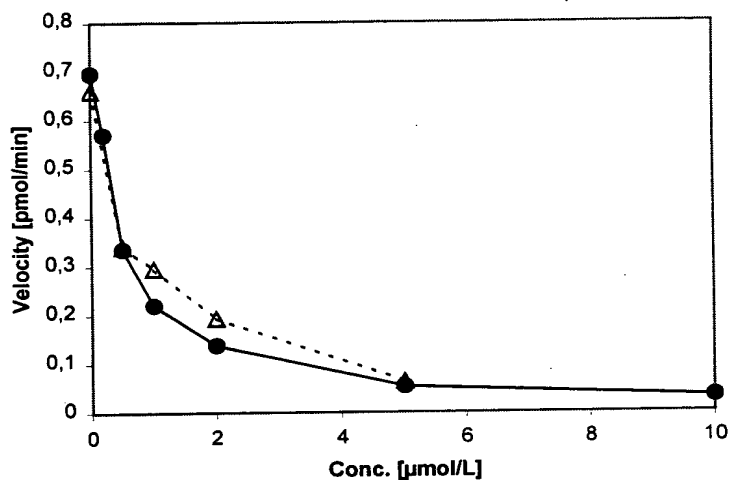
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**Figure 4**

**Figure 4.** Degradation of ONs 157 (open triangles) and 158 (closed circles) as a function of incubation time and compared to an unmodified control ON 159 (closed diamonds, insert) determined by CGE analysis.

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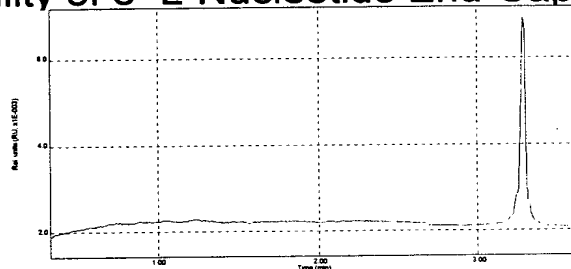
**Figure 5.**

**Figure 5.** Velocity of the enzymatic reaction: hydrolysis of ON 159 with BIPD as a function of the concentration of co-incubated ON 157 (open triangles) and ON 158 (closed circles).

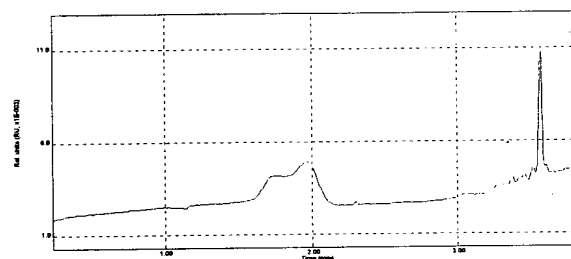
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## Stability of 3'-L-Nucleotide End-Capped

BalbC  
mice  
25 mg/kg  
dose  
i.v.



Starting Material



Liver @ 1hr

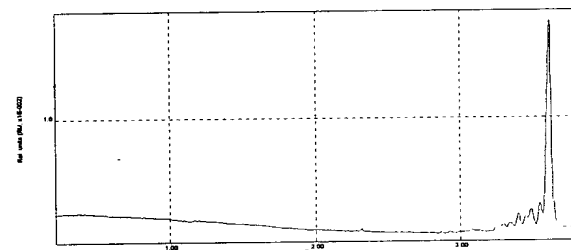
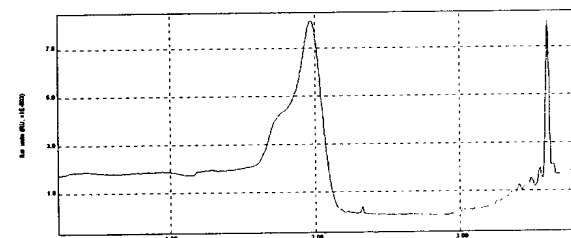
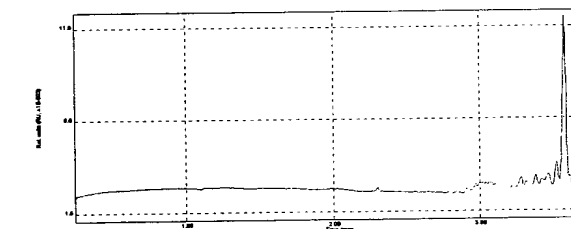
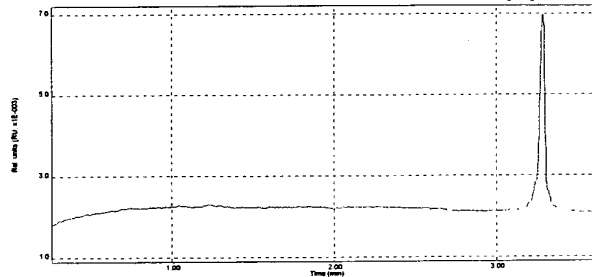
Kidney @ 1  
hrSpleen @ 1  
hrLung @  
1 hr

Figure 6

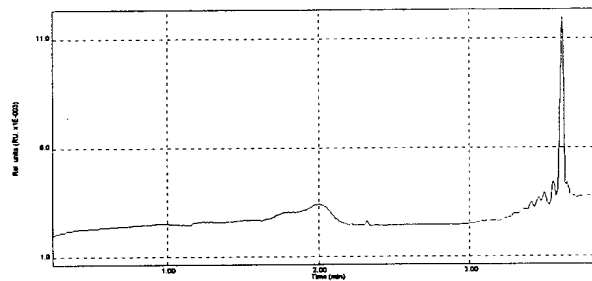
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## Stability of 3'-L-Nucleotide End-Capped

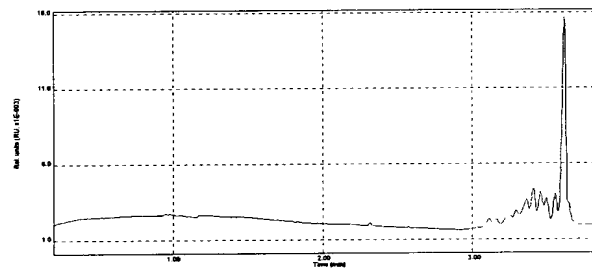
Starting Material



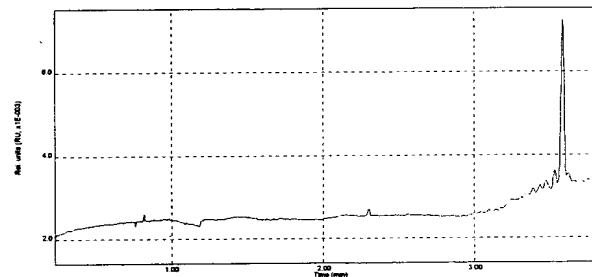
Liver @ 24 hr



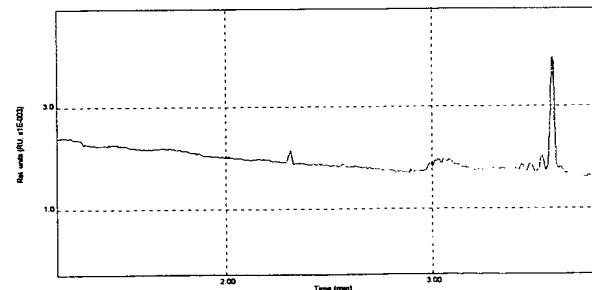
Kidney @ 24 hr



Spleen @ 24 hr



Lung @ 24 hr



BalbC  
mice  
25 mg/kg  
dose  
i.v.

Figure 7